



Tennessee Department of Environment and Conservation,  
Division of Water Pollution Control  
401 Church Street, 6<sup>th</sup> Floor L & C Annex, Nashville, TN 37243  
(615) 532-0625

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**CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)  
STATE OPERATING PERMIT (SOP)  
NOTICE OF INTENT (NOI)**

Type of permit you are requesting: ☐ SOPCD0000 (designed to discharge) ☐ SOPC00000 (no discharge) ☐ Unknown, please advise  
Application type: ☐ New Permit ☒ Permit Reissuance ☐ Permit Modification  
If this NOI is submitted for Permit Modification or Reissuance provide the existing permit tracking number: SOPC 0000

**OPERATION IDENTIFICATION**

Operation Name: <u>Robert Wilson A+B Poultry</u>		County: <u>Greene</u>
Operation Location/ Physical Address: <u>2338 Charlie Doty Rd</u>		Latitude:
		Longitude:
Name and distance to nearest receiving water(s): <u>Lick Creek 2000'</u>		
If any other State or Federal Water/Wastewater Permits have been obtained for this site, list those permit numbers:		
Animal Type: <input checked="" type="checkbox"/> Poultry <input type="checkbox"/> Swine <input type="checkbox"/> Dairy <input type="checkbox"/> Beef <input type="checkbox"/> Other _____		
Number of Animals: <u>94,000/flock/24 hr</u>		Number of Barns: <u>4</u>
		Name of Integrator: <u>Koch Foods</u>
Type of Animal Waste Management: (check all that apply) <input checked="" type="checkbox"/> Dry <input type="checkbox"/> Liquid <input type="checkbox"/> Liquid, Closed System (i.e. covered tank, under barn pit, etc.)		
Attach the NMP <input type="checkbox"/> NMP Attached	Attach the closure plan <input type="checkbox"/> Closure Plan Attached	Attach a topographic map <input type="checkbox"/> Map Attached

**PERMITTEE IDENTIFICATION**

Official Contact (applicant): <u>Robert E. Wilson</u>		Title or Position: <u>Owner</u>		<input type="checkbox"/> Correspondence <input type="checkbox"/> Invoice
Mailing Address: <u>2338 Charlie Doty Rd</u>		City: <u>Greeneville</u>	State: <u>TN</u> Zip: <u>37745</u>	
Phone number(s): <u>423 234 0271</u>		E-mail: <u>Wilfarm@centurylink.net</u>		
Optional Contact:		Title or Position:		<input type="checkbox"/> Correspondence <input type="checkbox"/> Invoice
Address:		City:	State: Zip:	
Phone number(s):		E-mail:		

**APPLICATION CERTIFICATION AND SIGNATURE (must be signed in accordance with the requirements of Rule 1200-4-5-.05)**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and title; print or type <u>Robert E. Wilson OWNER</u>	Signature <u>Robert E. Wilson</u>	Date <u>6-13-2011</u>
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**STATE USE ONLY**

Received Date <u>JAN 25 2013</u>	Reviewer	EFO	T & E Aquatic Fauna	Tracking No. <u>SOPC00150</u>
	Impaired Receiving Stream	High Quality Water		NOC Date

**Nutrient Management Plan (NMP) and CAFO Permit Application Checklist for SOPed 0000**

Facility Name: A&B Poultry  
 Name of Owner: Robert Wilson

Form Completed by: Robert Wilson

SOPC Requirements			Completion of Requirements (NMP/NM)			
Required Element	Permit Page #	Citation	Completed by producer or TSP		FOR TDA USE ONLY	
			Item Addressed In (C)NMP on Page #	Initials	Comments	Completed (Yes/No)
Notice of Intent (NOI) form	4	1.6.1	1	RW		Yes
Declarations Page, which addresses the following items:			19	RW		Yes
Prevents direct contact of confined animals with waters of the State.	8	3.1.e	"	JDM		Yes
Ensures chemicals or other contaminants handled on-site are handled (including spill clean-up) and disposed of properly.	8, 10	3.1.f, 4.6.1.a, 4.6.1.c	19	JDM		Yes
All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.	8	3.1.h	19	JDM		Yes
A copy of the most recent nutrient management plan (NMP) will be kept as part of the farm records and will be maintained and implemented as written.	9	3.1.j	19	JDM		Yes
If applicable, all waste directed to under-floor waste pits shall be composed entirely of wastewater (i.e., washwater, animal waste).	10	4.6.1.b	19	JDM		N/A
Notify TDEC of any significant wildlife mortalities following land application of animal wastes.	10	4.6.1.d	19	JDM		Yes
Address employee training for proper operation and maintenance of facility where employees are responsible for activities that relate to permit compliance.	10	4.6.1.e	19	JDM		Yes
There shall be no land application of nutrients within 24 hours of a precipitation event that may cause runoff. The operator shall not land apply nutrients to frozen, flooded, or saturated soils.	12	4.6.2.f	19	JDM	RECEIVED JAN 25 2013 TN Division Of Water Pollution Control	Yes

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Name of Owner: \_\_\_\_\_

SOPC Requirements*			Completed by producer or TSP		FOR TDA USE ONLY	
Required Element	Permit Page #	Citation	Item Addressed in (C)NMP on Page #	Initials	Comments	Completed (Yes/No)
Topo Map with Property Boundary	7	2.3.1.f	25	RW		Yes
Ortho Map with Property Boundary showing location of animal barns/ houses, compost bins, litter storage bins, manure lagoons/ holding ponds, nearby roads, fields to which manure/ litter will be applied, sinkholes, neighboring wells, wetlands, etc.			26	RW		Yes
The NMP contains Best Management Practices (BMPs)/ conservation practices necessary to manage production area.	8	3.1.a	2,3,4	RW		Yes
The NMP contains BMPs used (i.e. buffers) to control runoff of pollutants from land application.	8	3.1.g	2-17	RW		Yes
Ensures adequate waste storage. For liquid waste systems this would include: documentation of the total volume for solids accumulation, design treatment volume, total design volume, and approximate number of days for storage capacity.	8, 15	3.1.b, 5.2.g	N/A			N/A
Proper Management of Mortalities (also to be identified in Closure Plan).	8, 14	3.1.c, 4.10	17	RW		Yes
Clean water is diverted from the production area.	8, 11	3.1.d, 4.6.1.f	2-17	RW	p.18	Yes
Follow latest UT guidance for appropriate testing methods for manure.	8	3.1.h			p.18	Yes
Identify methods used to land apply litter, manure, or process wastewater.	9	3.1.i	2-17	RW	p.4	Yes
Nutrient budget or balance sheet of all nutrients (animal waste, compost, fertilizer, etc.) used on the farm based on current UT crop recommendations which ensures appropriate use of nutrients.	9	3.1.i	16	RW		Yes

Name of Owner: \_\_\_\_\_

SOPC Requirements			Completion of Requirements in CNMP / NMP			
Required Element	Permit Page #	Citation	Completed by producer or TSP		FOR TDA USE ONLY	
			Item Addressed in (C)NMP on Page #	Initials	Comments	Completed (Yes/No)
Expected crop yields	15	5.2.h	16	RW		Yes
NMP addresses facility maintenance.	9	3.2.c	3	RW		Yes
Closure/rehabilitation plan for waste system storage/treatment structure(s) and mortalities that addresses facility maintenance until proper closure to be completed within 360 days.	5, 13-14	1.6.3, 4.9	17	RW		Yes
Includes field specific assessment of potential for N and P2O5 transport from field to surface waters. Must address form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals (TN P Index must be provided for each field).	11	4.6.2.a.i	6-15	RW		Yes
Current manure/litter analysis for N and P2O5 (from within last year).	11	4.6.2.b	20	RW	1 yr. from when NMP written	Yes
Provide results of soil test conducted at a minimum of once every five years for all fields receiving manure, litter, or process wastewater.	11	4.6.2.b	21-23	RW		Yes
Applications of waste are no closer than 100 ft. to any down-gradient surface waters, open tile line intake structures, sinkholes, ag. wells, or other conduits to surface waters unless 100 ft. setback with a 35 ft. wide vegetated buffer is substituted or it is demonstrated that a setback/buffer is not needed due to use of alternate conservation practices or where field conditions would provide equivalent pollutant reductions.	11	4.6.2.d	2-	RW		Yes
New CAFOs located adjacent to high quality stream (Exceptional TN waters) leave in place a 60-ft natural riparian buffer between stream and land application area.	12	4.6.2.e	N/A			N/A

\* Effective July 1, 2010

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Name of Owner: \_\_\_\_\_

SOPC Requirements			Sketch of Requirement in CNMP/NM			
			Completed by producer or TSP		FOR TDA USE ONLY	
Required Element	Permit Page #	Citation	Item Addressed in (C)NMP on Page #	Initials	Comments	Completed (Yes/No)
<b>Liquid Waste Management System Requirements</b>						
Liquid waste management system must be designed to exclude all stormwater and must not contain any design allowances for a discharge.	12	4.7	N/A			N/A
If liquid waste management system was constructed, modified, repaired, or placed in operation after April 13, 2006, it must meet or exceed NRCS FOTG standards. This should consist of pertinent engineered drawings (i.e. schematic of system) accompanied by a descriptive narrative.	12	4.7	N/A			↓
Any new or additional confinement buildings, waste containment/ treatment structures constructed after April 13, 2006 shall be located according to NRCS Practice Standard 313.	12	4.7.a	N/A			
If any earthen structures were constructed or modified after April 13, 2006, a subsurface investigation is provided.	12	4.7.b	N/A			

Comments:

**Nutrient Management Plan**

For:

A & B Poultry  
Robert Wilson  
2338 Charlie Doty Road  
Greeneville, TN 37745

Phone: 423-234-0271

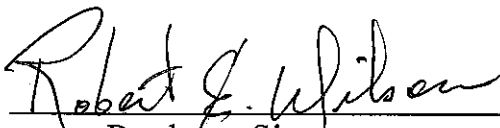
County: Greene

Type of Operation: Broiler

Size of Operation: 94,000 birds per growout, 6 growouts per year.

Nutrient Management Plan Prepared by: University of Tennessee  
Extension

Date: January 2013 (revised and updated May 30, 2013)

  
\_\_\_\_\_  
Producer Signature

5/30/2013

\_\_\_\_\_  
Date

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## Summary

The A & B poultry operation is a 4 house broiler operation in Greene County in East Tennessee. It has a capacity of 94,000 birds per growout, with 6 growouts per year.

Litter will be surface applied according to recommendation made in the table below.  
Table 1

Field #	Acres	Crop	Litter Rate/Acre	Litter Rate/Field
Plot 2	15	Hay & Pasture	1.4	21
Plot 3	30	Hay & Pasture	0	0
Plot 4	15	Hay & Pasture	1.9**	29
Plot 5	25	Hay & Pasture	3.0**	75
Plot 6	3	Hay & Pasture	1.25	3.75
			Total	128.75

\*\*50% applied in Spring, 50% in F

Total litter usage for these fields (Approximately 129 tons) is far less than the amount produced (300 tons) creating a need for alternate methods of Litter Disposal. The producer is currently marketing litter to other individuals as fertilizer materials. Current annual marketings are as follows:

- Marketing =248 tons
- Potential on farm use of 128.75 tons

Total potential usage and marketings = 377 tons which exceeds total production (300 tons)

### Best Management Practices

#### Permanent Vegetative Buffer Strips

No litter should be applied within 100 feet of any surface water, drainage ditches or other conveyances that might impact water quality. A permanent vegetative buffer of 35 feet minimum width will be maintained for filtering any runoff from treated areas.

#### Nutrient Management

Soil tests will be taken a minimum of once every three years to monitor soil pH and check on phosphorus and potassium levels of the soil.

Litter samples will be collected annually to more accurately determine the nutrient concentrations of the material. Litter should be spring applied on the forage fields and also fall applied for fields that are for hay and pasture. Litter will be surface applied as indicated on the Nutrient Application and Balance sheet attached to the NMP.

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Complete and accurate records will be kept on the application of litter to fields as well as any litter removed from the farm by the owner or third parties. The amount of litter sold or spread on the farm, and in temporary storage will equal the amount of litter produced by the operation and will be reflected in the records kept.

### **System Description**

The A & B Poultry operation is a four house operation with the dimensions of each house being 40' x 400' with a total capacity of 23,500 birds each.

Between growouts a housekeeper is utilized to remove the cake from the houses. The houses will only be totally cleaned out when necessary. The litter will be surface applied to fields in the spring prior to spring growth of forages.

Maps of the area where litter will be applied are attached as an appendix to this plan.

### **Litter & Facility Management**

The birds are housed on shavings and sawdust which is cleaned between growouts using a housekeeper and litter removed by total house cleanout only when necessary. Litter that cannot be taken directly to the field and land applied will be placed in temporary storage.

The litter storage facility is 50' x 100' and can be stacked to a maximum depth of 8'. New litter will not be combined with older litter already in storage. During house cleanout, litter will be immediately stored under cover in the existing roofed litter storage facility. All stormwater and normal runoff is diverted away from litter storage facility and poultry houses. Assuming that the density of litter removed is 32lbs. per cubic foot, it is estimated that this structure is capable of storing in excess of 640 tons of litter.

There are approximately 300 tons of material removed annually from the four houses combined. Therefore, there are 300 tons of litter to be stored, marketed, or land applied.

### **Mortality Management**

Mortalities are handled by composting in bins as part of the litter storage building for birds up to 4 weeks of age. Birds more than 4 weeks of age are buried in an approved manner.

### **Litter and Soil Analyses**

Litter analysis was done in July of 2011 and the results are reported in Table 2. The analysis was done at the University of Arkansas diagnostic laboratory and a copy is attached. Soil samples were submitted to the University of Tennessee Soil lab. Samples are attached.

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Table 2 Litter Analysis (lbs. per ton on "as is" basis) and Estimate of Litter Nutrients

Nutrient	Analysis (lbs./ton	Estimate for 4 Houses
Nitrogen	55.6	16,680
Phosphorus	56.3	16,890
Potassium	52.8	15,840

### Estimation of Litter Application Rates

Tennessee Natural Resources Conservation Service (NRCS) guidelines for Nutrient Management (Conservation Standard 590) state that manure or litter application rates should be based on either soil test recommendations or a site assessment using the Tennessee Phosphorus Risk Index. Nitrogen based manure application is allowed on sites on which there is a soil test recommendation to apply phosphorus. On sites where there is no recommendation to apply phosphorus, application should be based on the Phosphorus Index (PI) rating. Nitrogen based application is allowed on sites rated as low or medium risks. On sites based as high or very high risks, application based on crop phosphorus rates is allowed.

Based on soil test results, samples 2, 3, 4, 5, and 6, will have the PI applied to them. Application of litter at the nitrogen rate is possible based upon the PI results for the rates listed in table 1 which were all medium. Total litter usage for these fields (approximately 128.75 tons) is less than the amount produced (300 tons) creating a need for alternate methods of Litter Disposal. The producer is currently marketing litter to other individuals as fertilizer materials. Current annual marketings are as follows:

- Marketing = 248 tons
- Potential on farm use of 128.75 tons

Total potential usage and marketings = 377 tons which exceeds the 300 ton production.

- No commercial fertilizer will be applied

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**Phosphorus Risk Index**  
Plot 2

<b>Part A: Phosphorus loss potential due to site and transport characteristics</b>						
<b>Transport</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<i>(1 point)</i>	<i>(2 points)</i>	<i>(4 points)</i>	<i>(8 points)</i>		
<i>Hydrologic Soil Group (Table 1)</i>	A	B	C	D	4	4
<i>Erosion Potential (Table 2)</i>	-	Low	Medium	High	2	2
<i>Permanent Vegetative Buffer Width *(ft)</i>	>29	20-29	10-29	< 10	1	1
<i>Non-Application Width from Surface Water conveyance (ft)</i>	>29	20-29	10-29	< 10	2	2
<b>Part A: Total Site Value:</b>					9	9

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

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Part B: Phosphorus loss potential due to source and management characteristics						
Source	Phosphorus Loss Rating				Before Value	After Value
	(1 point)	(2 points)	(4 points)	(8 points)		
<b>Soil Test P Value</b>	Low	Medium	High	Very High	4	4
<b>P Application Rate</b> (lbs/ac/crop or crop sequence/rotation)	0.20 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as commercial fertilizer 0.10 x 65 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids Sample 2 0.10 x 106 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids Sample 3 0.05 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				9	7.9
<b>Application Timing</b>	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
<b>Application Method</b>	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
					23	21.9

**Part B: Total Management Value:**

**Before Value – Part A 9 X Part B 23 = 207 P Loss Rating**

**After Value – Part A 9 X Part B 21.9 = 197 P Loss Rating**

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# Phosphorus Risk Index

Plot 3

Part A: Phosphorus loss potential due to site and transport characteristics						
Transport	Phosphorus Loss Rating				Before Value	After Value
	(1 point)	(2 points)	(4 points)	(8 points)		
<i>Hydrologic Soil Group (Table 1)</i>	A	B	C	D	8	8
<i>Erosion Potential (Table 2)</i>	-	Low	Medium	High	2	2
<i>Permanent Vegetative Buffer Width *(ft)</i>	>29	20-29	10-29	< 10	1	1
<i>Non-Application Width from Surface Water conveyance (ft)</i>	>29	20-29	10-29	< 10	1	1
<b>Part A: Total Site Value:</b>					12	12

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

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Part B: Phosphorus loss potential due to source and management characteristics						
Source	Phosphorus Loss Rating				Before Value	After Value
	(1 point)	(2 points)	(4 points)	(8 points)		
<b>Soil Test P Value</b>	Low	Medium	High	Very High	4	4
<b>P Application Rate</b> (lbs/ac/crop or crop sequence/rotation)	0.20 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as commercial fertilizer 0.10 x 106 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids Sample 4 0.10 x 53 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids Sample 6 0.05 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				0	0
<b>Application Timing</b>	June -- Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
<b>Application Method</b>	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
<b>Part B: Total Management Value:</b>					14	14

Before Value – Part A 12 X Part B 14 = 168 P Loss Rating

After Value – Part A 12 X Part B 14 = 168 P Loss Rating

No litter applied to this field

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**Phosphorus Risk Index**  
Plot 4

<b>Part A: Phosphorus loss potential due to site and transport characteristics</b>						
<b>Transport</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<i>(1 point)</i>	<i>(2 points)</i>	<i>(4 points)</i>	<i>(8 points)</i>		
<i>Hydrologic Soil Group (Table 1)</i>	A	B	C	D	4	4
<i>Erosion Potential (Table 2)</i>	-	Low	Medium	High	2	2
<i>Permanent Vegetative Buffer Width *(ft)</i>	>29	20-29	10-29	< 10	1	1
<i>Non-Application Width from Surface Water conveyance (ft)</i>	>29	20-29	10-29	< 10	1	1
<b>Part A: Total Site Value:</b>					8	8

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

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Part B: Phosphorus loss potential due to source and management characteristics						
Source	Phosphorus Loss Rating				Before Value	After Value
	(1 point)	(2 points)	(4 points)	(8 points)		
<b>Soil Test P Value</b>	Low	Medium	High	Very High	4	4
<b>P Application Rate</b> (lbs/ac/crop or crop sequence/rotation)	0.20 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as commercial fertilizer 0.10 x 53 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids 0.05 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				10.6	10.7
<b>Application Timing</b>	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
<b>Application Method</b>	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
					24.6	24.7

**Part B: Total Management Value:**

Before Value – Part A 8 X Part B 24.6 = 196.8 P Loss Rating

After Value – Part A 8 X Part B 24.7 = 197.6 P Loss Rating

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**Phosphorus Risk Index**  
Plot 5

<b>Part A: Phosphorus loss potential due to site and transport characteristics</b>						
<b>Transport</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<i>(1 point)</i>	<i>(2 points)</i>	<i>(4 points)</i>	<i>(8 points)</i>		
<i>Hydrologic Soil Group (Table 1)</i>	A	B	C	D	2	2
<i>Erosion Potential (Table 2)</i>	-	Low	Medium	High	2	2
<i>Permanent Vegetative Buffer Width *(ft)</i>	>29	20-29	10-29	< 10	1	1
<i>Non-Application Width from Surface Water conveyance (ft)</i>	>29	20-29	10-29	< 10	1	1
<b>Part A: Total Site Value:</b>					6	6

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

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<b>Part B: Phosphorus loss potential due to source and management characteristics</b>						
<b>Source</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<i>(1 point)</i>	<i>(2 points)</i>	<i>(4 points)</i>	<i>(8 points)</i>		
<b>Soil Test P Value</b>	Low	Medium	High	Very High	4	4
<b>P Application Rate (lbs/ac/crop or crop sequence/rotation)</b>	0.20 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as commercial fertilizer 0.10 x 53 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids 0.05 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				10.6	16.9
<b>Application Timing</b>	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
<b>Application Method</b>	Injected/Banded 2” below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
					24.6	30.9

**After Value – Part A 6 X Part B 30.9 = 185 P Loss Rating**

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**Phosphorus Risk Index**  
Plot 6

<b>Part A: Phosphorus loss potential due to site and transport characteristics</b>						
<b>Transport</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<i>(1 point)</i>	<i>(2 points)</i>	<i>(4 points)</i>	<i>(8 points)</i>		
<i>Hydrologic Soil Group (Table 1)</i>	A	B	C	D	4	4
<i>Erosion Potential (Table 2)</i>	-	Low	Medium	High	2	2
<i>Permanent Vegetative Buffer Width *(ft)</i>	>29	20-29	10-29	< 10	1	1
<i>Non-Application Width from Surface Water conveyance (ft)</i>	>29	20-29	10-29	< 10	1	1
<b>Part A: Total Site Value:</b>					8	8

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

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<b>Source</b>	<b>Phosphorus Loss Rating</b>				<b>Before Value</b>	<b>After Value</b>
	<b>(1 point)</b>	<b>(2 points)</b>	<b>(4 points)</b>	<b>(8 points)</b>		
<b>Soil Test P Value</b>	Low	Medium	High	Very High	4	8
<b>P Application Rate</b> <i>(lbs/ac/crop or crop sequence/rotation)</i>	0.20 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as commercial fertilizer 0.10 x 53 lbs P <sub>2</sub> O <sub>5</sub> applied as manure, litter, or biosolids 0.05 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P <sub>2</sub> O <sub>5</sub> applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				5.3	7
<b>Application Timing</b>	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
<b>Application Method</b>	Injected/Banded 2” below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
<b>Part B: Total Management Value:</b>					19.3	25

**After Value – Part A 8 X Part B 25 = 200 P Loss Rating**

14

**Records**

The Following records will be kept:

1. Analysis of representative litter samples collected annually.
2. Estimated volumes and weights of litter removed from each house
3. Rates of litter applied to each field.
4. Litter sold and removed from the farm by the owner and/or third parties.
5. Soil test results collected a minimum of every third year.

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# **Appendix**

**Field Nutrient Application and Balance Sheet**

**Closure Plan**

**Addendum to Nutrient Management Plan**

**Declarations to Nutrient Management Plan**

**Litter Analysis**

**Soil Test Results**

**Hand Drawn Map**

**Ortho Map**

**Topographic Map**

**Notice of Intent**

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# Closure Plan

In the event that broiler production at this location ceases, the following will be done within 360 days:

- Any litter/compost currently in storage at the time of closure will be removed and spread on the farm or spread elsewhere according to my Nutrient Management Plan.
- All litter in houses will be removed and spread on the farm or spread elsewhere according to my Nutrient Management Plan.
- All land application of litter will be done at application rates calculated in the Nutrient Management Plan.
- The most current litter analysis will be provided to anyone removing litter from the farm.
- Any dead birds in the houses at the time of closure will be composted taken to the approved landfill/ picked up by rendering company/ incinerated (*circle which applies*).

Robert E. Wilson

Date: Aug 1, 2011

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## Addendum to Nutrient Management Plan:

By my signature below, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO rule (1200-4-5-.14) that apply to my CAFO operation.

- 1) All clean water (including rainfall) is diverted, as appropriate, from the production area.
- 2) All animals in confinement are prevented from coming in direct contact with waters of the state.
- 3) All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
- 4) All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
- 5) All records outlined in 1200-4-5-.14(16)d-f will be maintained and available on-site.
- 6) Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed after April 13, 2006 are or will be located in accordance with NRCS Conservation Practice Standard 313.
- 7) Drystacks of manure or stockpiles of litter are always kept covered under roof or tarps.
- 8) An *Annual Report* will be written for my operation and submitted between January 1 and February 15 of each year. It will include all information required by rule [1200-4-5-.14(16)g].

  
Signature of CAFO Operator:

8-1-2011  
Date:

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(19)

A+B Poultry  
Facility Name

## Declarations to Nutrient Management Plan:

By my signature below, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO regulations that apply to my CAFO operation:

- 1) All animals in confinement are prevented from coming in direct contact with waters of the state.
- 2) All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
- 3) Pesticide-contaminated waters will be prevented from discharging into waste retention structures. Waste from pest control and from facilities used to manage potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that will prevent pollutants from entering waste retention structures or waters of the state.
- 4) Chemicals, manure/litter, and process wastewater will be managed to prevent spills. Spill clean-up plans will be developed and any equipment needed for spill clean-up will be available to facility personnel.
- 5) All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
- 6) All records outlined in the permit that I am applying for will be maintained and available on-site.
- 7) Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed or modified after April 13, 2006, are or will be located in accordance with NRCS Conservation Practice Standard 313.
- 8) A copy of the most recent Nutrient Management Plan will be kept as part of the farm records and will be maintained and implemented as written.
- 9) If applicable, all waste directed to under floor pits shall be composed entirely of wastewater (i.e. washwater and animal waste).
- 10) The Tennessee Department of Environment and Conservation Division of Water Resources will be notified of any significant wildlife mortalities near retention ponds or following any land application of animal wastes to fields.
- 11) All employees involved in work activities that relate to permit compliance will receive regular training on proper operation and maintenance (O&M) of the facility and waste disposal. Training shall include appropriate topics, such as land application of wastes, good housekeeping and material management practices, proper O&M of the facility, record keeping, and spill response and clean up. The periodic scheduled dates for such training shall be identified in the current Nutrient Management Plan.
- 12) There shall be no land application of nutrients within 24 hours of a precipitation event that may cause runoff. The operator shall not land apply nutrients to frozen, flooded, or saturated soils.

Robert E. Wilson  
Signature of CAFO Owner/Operator

1-10-2013  
Date

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AGRICULTURAL DIAGNOSTIC LABORATORY  
UNIVERSITY OF ARKANSAS - FAYETTEVILLE

\*\*\*MANURE FOR FERTILIZER ANALYSIS (report for AGR1-429)

Name:	ROBERT E. WILSON	Received in lab:	1/31/2013
Address:	2338 CHARLIE DOTY RD.	Mailed:	2/06/2013
City:	GREENEVILLE	State, Zip:	TN 37745
County:	GREENE (TN)	CK#:	6519

Lab. No.	M30188					
Sample No.	NONE GIVEN					
Animal type	broilers					
-age/lbs	none given					
Bedding type	shavings/sawdust					
Manure type	none given					
Sample date	1/23/2013					
Age of manure	5 weeks					
pH	8.6					
EC(µmhos/cm)	11730					
% H2O	27.02					

-on dry basis-

Total %N	4.52					
Total %P	1.52					
Total %K	3.40					
Total %Ca	3.15					
Total %Carbon	38.28					
NO3-N, mg/kg						
NH4-N, mg/kg						

-on as-is basis-

Total %N	3.30					
Total %P	1.11					
Total %K	2.48					
Total %Ca	2.30					
Total %Carbon	27.94					
NO3-N, mg/kg						
NH4-N, mg/kg						

-lbs/ton on as-is basis-

N	66.0					
P2O5	50.8					
K2O	60.0					
Ca	46.0					
Total Carbon	558.8					
NO3-N						
NH4-N						

\*\*\*all analyses performed on "as-is" basis/ "dry" basis is calculated from moisture content

\*lbs/ton P2O5 = %Total P on "as-is" basis multiplied by 20\*2.29

\*lbs/ton K2O = %Total K on "as-is" basis multiplied by 20\*1.2

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July - 2011

(21)

# SOIL TEST REPORT

ROBERT E WILSON  
2338 CHARLIE DOTY ROAD  
GREENEVILLE, TN 37745

*Deborah K. Joines*  
Deborah K. Joines  
Manager  
Soil, Plant and Pest Center  
5201 Marchant Drive  
Nashville, TN 37211-5112  
(615) 832-5850  
soilplantpestcenter@utk.edu

Date Tested: 6/29/2011

County: Greene

Lab Number: 418108

## Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID		PLOT02												(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	S Sulfur	Nitrates (ppm)												
6.1		99 H	63 L	2105 S	274 S																				
		Organic Matter %	Soluble Salts PPM**																						

## RECOMMENDATIONS

### PLOT02 Fertilizer/Lime Application Rate and Timing

#### Grass or Grass/Legume Hay

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 30-165 / 0 / 60-90 pounds per acre

Limestone: Lime is not recommended at this time

Apply recommended amounts of phosphate and potash (higher rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O for seeding) in one application anytime during the year. Apply 60 pounds of nitrogen per acre March 1-30 (30 lbs. if > 30% legumes are present). Where a second cutting is expected, apply an additional 45 pounds of N per acre immediately after the first cutting. Stockpiling fescue in the fall 60 pounds of N per acre is suggested August 15 to September 15 if moisture is available. If renovating with legumes, nitrogen should be omitted.

If urea is the nitrogen source, especially for fall topdressings, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall. If more than 4 tons of lime per acre is required, apply only 4 tons of lime per acre and re-test after one year.

County: Greene

Lab Number: 418109

## Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID		PLOT03		(Pounds Per Acre)																				
Water pH	Buffer Value	P Phosphorus		K Potassium		Ca Calcium		Mg Magnesium		Zn Zinc		Cu Copper		Fe Iron		Mn Manganese		B Boron		Na Sodium		S Sulfur		Nitrates (ppm)
5.9	7.6	94	H	465	V	1685	S	306	S															
		Organic Matter %		Soluble Salts PPM**																				

WILSON - Page 1

\*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

\*\*PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

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PLOT03

Fertilizer/Lime Application Rate and Timing

### Grass or Grass/Legume Hay

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 30-165 / 0 / 0 pounds per acre

Limestone: 2 tons per acre

Apply recommended amounts of phosphate and potash (higher rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O for seeding) in one application anytime during the year. Apply 60 pounds of nitrogen per acre March 1-30 (30 lbs. if > 30% legumes are present). Where a second cutting is expected, apply an additional 45 pounds of N per acre immediately after the first cutting. Stockpiling fescue in the fall 60 pounds of N per acre is suggested August 15 to September 15 if moisture is available. If renovating with legumes, nitrogen should be omitted.

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County: Greene

Lab Number: 418110

### Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID: PLOT04

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	S Sulfur	Nitrates (ppm)
6.0	7.5	63 H	147 M	3099 S	311 S								
		Organic Matter %	Soluble Salts PPM**										

## RECOMMENDATIONS

PLOT04

Fertilizer/Lime Application Rate and Timing

### Grass or Grass/Legume Hay

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 30-165 / 0 / 30-60 pounds per acre

Limestone: 2 tons per acre

Apply recommended amounts of phosphate and potash (higher rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O for seeding) in one application anytime during the year. Apply 60 pounds of nitrogen per acre March 1-30 (30 lbs. if > 30% legumes are present). Where a second cutting is expected, apply an additional 45 pounds of N per acre immediately after the first cutting. Stockpiling fescue in the fall 60 pounds of N per acre is suggested August 15 to September 15 if moisture is available. If renovating with legumes, nitrogen should be omitted.

If urea is the nitrogen source, especially for fall topdressings, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall. If more than 4 tons of lime per acre is required, apply only 4 tons of lime per acre and re-test after one year.

County: Greene

Lab Number: 418111

### Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID: PLOT05

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	S Sulfur	Nitrates (ppm)
5.5	7.6	89 H	142 M	1627 S	207 S								

\*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

\*\*PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

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## RECOMMENDATIONS

PLOT05

Fertilizer/Lime Application Rate and Timing

Grass or Grass/Legume Hay

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 30-165 / 0 / 30-60 pounds per acre

Limestone: 2 tons per acre

Apply recommended amounts of phosphate and potash (higher rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O for seeding) in one application anytime during the year. Apply 60 pounds of nitrogen per acre March 1-30 (30 lbs. if > 30% legumes are present). Where a second cutting is expected, apply an additional 45 pounds of N per acre immediately after the first cutting. Stockpiling fescue in the fall 60 pounds of N per acre is suggested August 15 to September 15 if moisture is available. If renovating with legumes, nitrogen should be omitted.

If urea is the nitrogen source, especially for fall topdressings, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall. If more than 4 tons of lime per acre is required, apply only 4 tons of lime per acre and re-test after one year.

County: Greene

Lab Number: 418112

## Mehlich 1 SOIL TEST RESULTS and RATINGS

Sample ID PLOT06

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	S Sulfur	Nitrates (ppm)
5.9	7.6	146 V	234 H	1925 S	275 S								
		Organic Matter %	Soluble Salts PPM**										

## RECOMMENDATIONS

PLOT06

Fertilizer/Lime Application Rate and Timing

Grass or Grass/Legume Hay

N / P<sub>2</sub>O<sub>5</sub> / K<sub>2</sub>O

Nitrogen/Phosphate/Potash: 30-165 / 0 / 0 pounds per acre

Limestone: 2 tons per acre

Apply recommended amounts of phosphate and potash (higher rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O for seeding) in one application anytime during the year. Apply 60 pounds of nitrogen per acre March 1-30 (30 lbs. if > 30% legumes are present). Where a second cutting is expected, apply an additional 45 pounds of N per acre immediately after the first cutting. Stockpiling fescue in the fall 60 pounds of N per acre is suggested August 15 to September 15 if moisture is available. If renovating with legumes, nitrogen should be omitted.

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WILSON - Page 3

\*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

\*\*PPM = Parts per Million

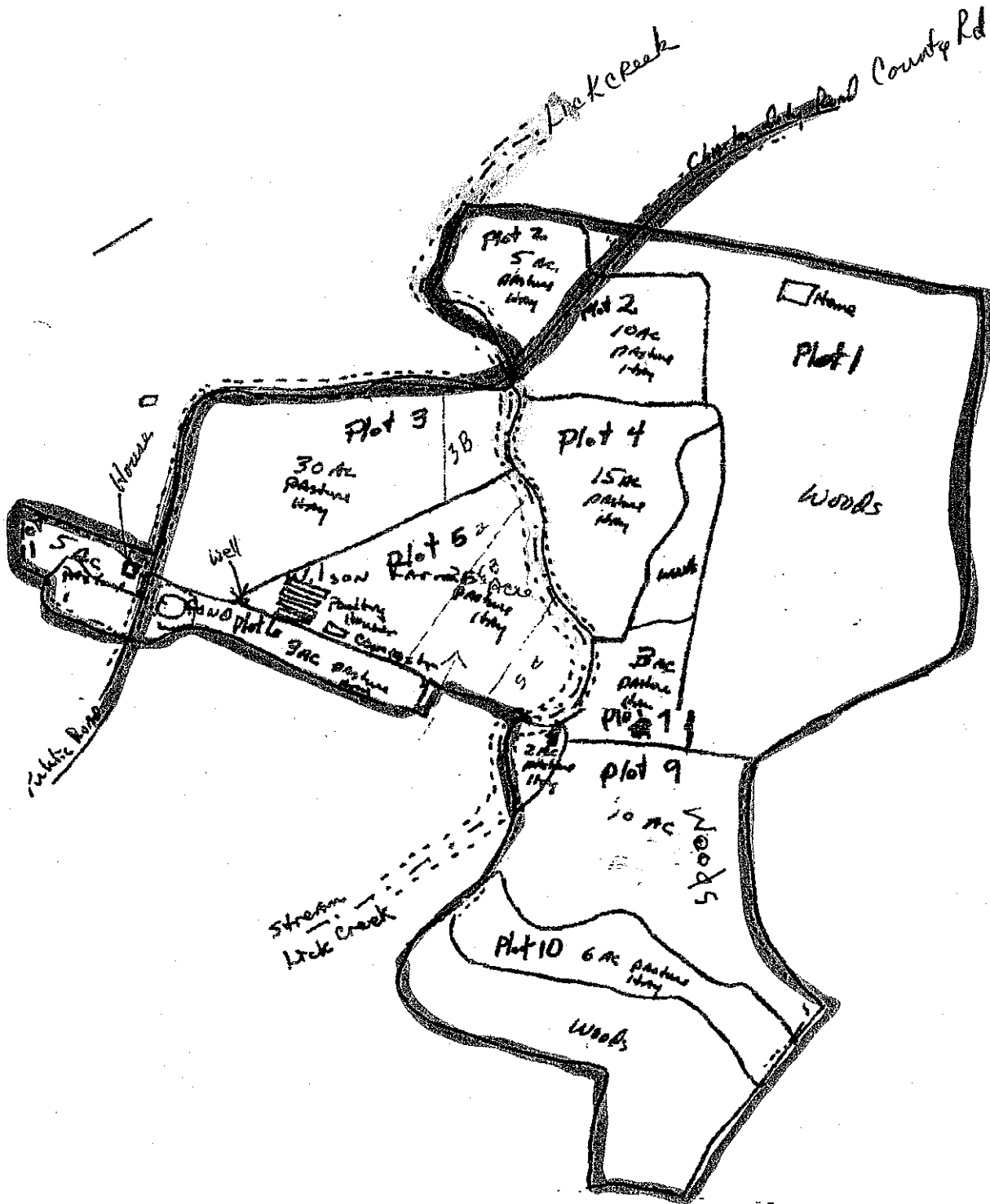
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Buffer Area .....  
Stream .....-o-.....



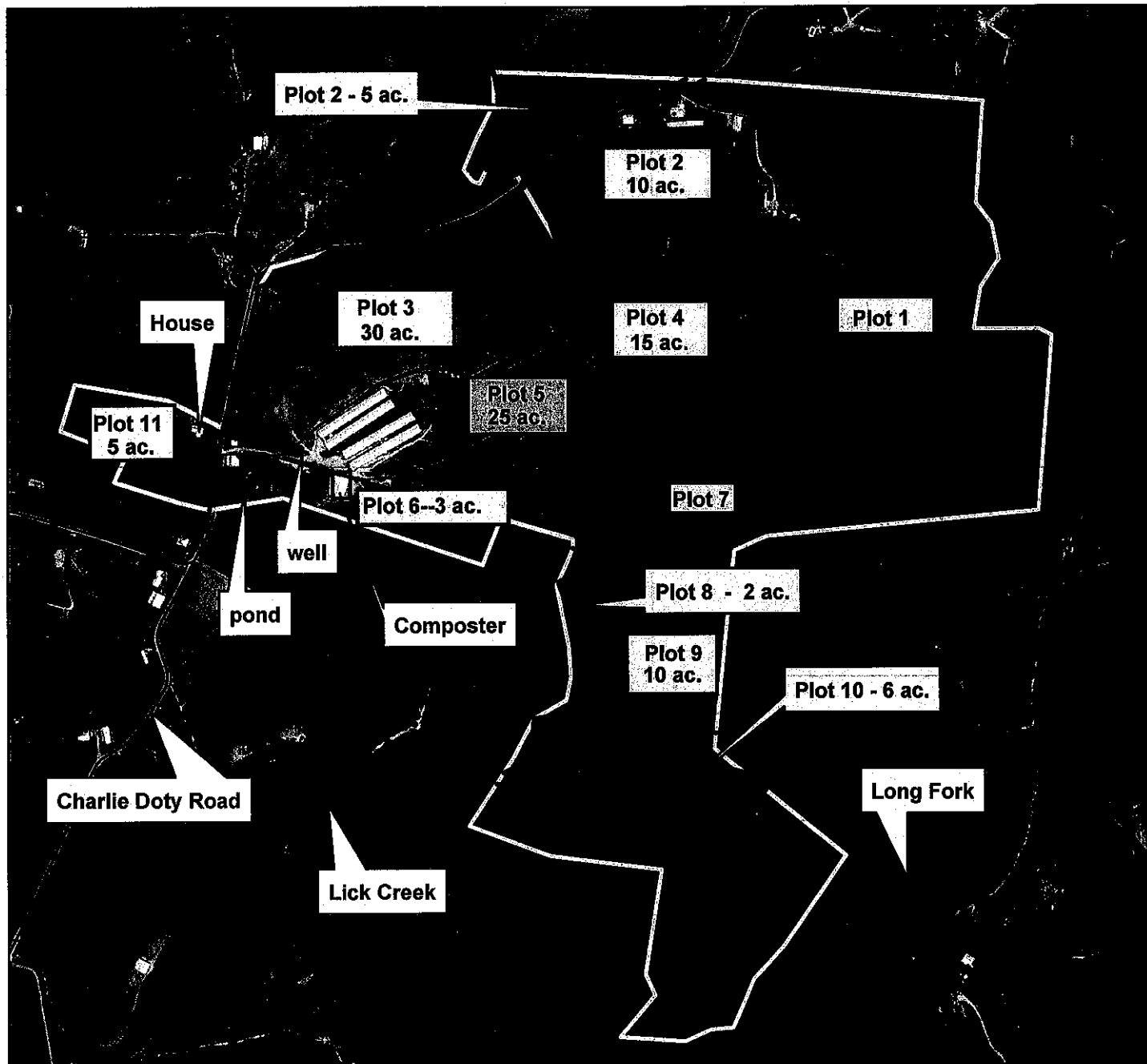
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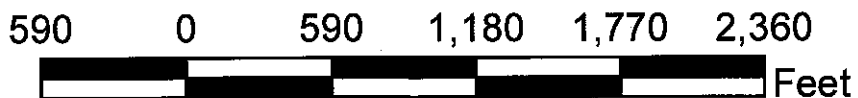
ROBERT WILSON  
2338 Charlie Doty Road  
Greeneville, TN 37745

January 10, 2013



**Legend**

- Buffer
- Consplan
- Field Boundary
- Roads
- Streams



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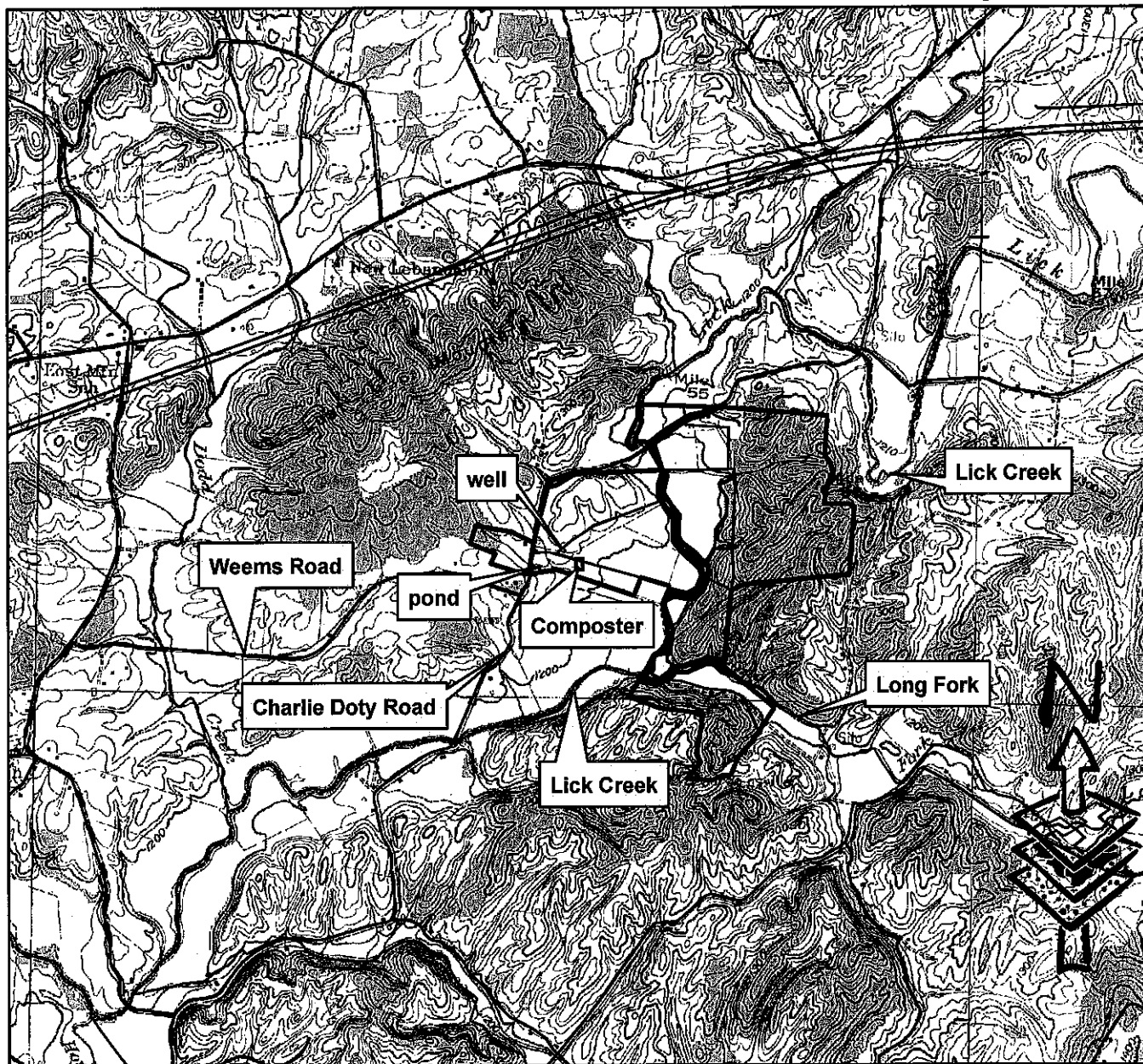
JUN 03 2013



**ROBERT WILSON**  
2338 Charlie Doty Road  
Greeneville, TN 37745

**Scale: 1:24,000**

**January 10, 2013**



**Legend**

- Buffer
- Conspian
- Field Boundary
- Roads
- Streams



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